

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BOARD OF PATENT APPEALS AND INTERFERENCES**

In re patent application of:  
Badura, et al.

Atty. Docket No.: YOR920010552US1

Serial No.: 09/943,841

Group Art Unit: 3623

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Examiner: Graysay, Tamara L.

For: ELECTRONIC METHOD FOR DETERMINING PROCUREMENT BUSINESS  
STRATEGY

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**APPELLANTS' APPEAL BRIEF**

Sirs:

Appellant respectfully appeals the final rejection of claims 1-3, 5-8, 10, 12-16, and 18-22, in the Office Action dated April 5, 2007. A Notice of Appeal and Pre-Appeal Brief Request for Review was timely filed on June 9, 2007.

## Appeal Brief

### **I. REAL PARTY IN INTEREST**

The real party in interest is International Business Machines Corporation, Armonk, New York, assignee of 100% interest of the above-referenced patent application.

### **II. RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences known to Appellants, Appellants' legal representative or Assignee which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

### **III. STATUS OF CLAIMS**

Claims 1-3, 5-8, 10-, 12-16, and 18-22, all the claims pending in the application, stand rejected under 35 U.S.C. §103(a) as being unpatentable over Marsh, et al. (U.S. Patent No. 6,681,106), hereinafter referred to as Marsh, in view of Dalheimer ("LinuzTag 2001 Proceedings: Virtual Companies"), hereinafter referred to as Dalheimer.

### **IV. STATUS OF AMENDMENTS**

In response to the Office Action mailed on April 5, 2005 (hereinafter referred to as "the Office Action"), an after-final Response that made no claim amendments was filed on May 15, 2007. An Advisory Action dated May 24, 2007 indicated that, upon filing an appeal, the Response filed on May 15, 2007 did not place the application in condition for allowance, and that the rejections of claims would remain. The claims

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shown in the appendix are shown in their amended form as of the January 3, 2007

Amendment.

### **V. SUMMARY OF CLAIMED SUBJECT MATTER**

One feature of the invention is a method of selecting from a plurality of modes of communication. Claim 1 defines this feature as follows: "a method of selecting from a plurality of modes of communication." This feature is described at various points in the specification, for example paragraph [0017] describes this feature as follows: "a Web Wizard which automates the selection of the appropriate communication arrangement for the supplier in question". This is shown in Figure 3.

Another feature of the invention is inputting a first party's ability to communicate with a second party. Claim 1 defines this feature as follows: "inputting a first party's ability to communicate with a second party." This feature is described at various points in the specification, for example paragraph [0017] describes this feature as follows: "item 110 represents the input of a supplier's capabilities". This is shown in Figure 1.

Another feature of the invention is evaluating a cost effectiveness of a mode of communication of the modes of communication based on the first party's ability to communicate, wherein the modes of communication comprise at least two of telephone, facsimile, hard copy mail, electronic mail, and at least one on-line communication arrangement. Claim 1 defines this feature as follows: "evaluating a cost effectiveness of a mode of communication of said modes of communication based on said first party's ability to communicate, wherein said modes of communication comprise at least two of

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telephone, facsimile, hard copy mail, electronic mail, and at least one on-line communication arrangement." This feature is described at various points in the specification, for example paragraph [0025] describes this feature as follows:

"communication arrangement should be evaluated to determine whether the costs associated with establishing the communication arrangement for a given supplier is worth the cost savings compared to the next best alternative communication arrangement". This is shown in Figures 4A-4D.

Another feature of the invention is inputting the first party's ability into a decision tree. Claim 1 defines this feature as follows: "inputting said first party's ability into a decision tree." This feature is described at various points in the specification, for example paragraph [0017] describes this feature as follows: "the purchasing agent enters such information through a computer interface (e.g., Figure 5) into the portion of the invention that provides the decision tree". This is shown in Figure 1.

Another feature of the invention is determining a cost of establishing and maintaining the mode of communication. Claim 1 defines this feature as follows: "determining a cost of establishing and maintaining said mode of communication." This feature is described at various points in the specification, for example paragraph [0025] describes this feature as follows: "communication arrangement should be evaluated to determine whether the costs associated with establishing the communication arrangement for a given supplier is worth the cost savings compared to the next best alternative communication arrangement". This is shown in Figures 4A-4D.

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Another feature of the invention is determining a savings associated with the mode of communication. Claim 1 defines this feature as follows: "determining a savings associated with said mode of communication." This feature is described at various points in the specification, for example paragraph [0025] describes this feature as follows:

"communication arrangement should be evaluated to determine whether the costs associated with establishing the communication arrangement for a given supplier is worth the cost savings compared to the next best alternative communication arrangement". This is shown in Figures 4A-4D.

Another feature of the invention is comparing the cost to the savings to calculate a return on investment associated with the establishing and the maintaining of the mode of communication. Claim 1 defines this feature as follows: "comparing said cost to said savings to calculate a return on investment associated with said establishing and said maintaining of said mode of communication." This feature is described at various points in the specification, for example paragraph [0027] describes this feature as follows: "the savings per day is divided by the investment required for the Web-based system to determine the number of days required before the investment is paid back ". This is shown in Figure 4D.

Another feature of the invention is repeating the evaluating for a different mode of communication of the modes of communication if the first party's ability does not match a mode of communication of the modes of communication previously evaluated. Claim 1 defines this feature as follows: "repeating said evaluating for a different mode of communication of said modes of communication if said first party's ability does not

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match a mode of communication of said modes of communication previously evaluated."

This feature is described at various points in the specification, for example paragraph [0029] describes this feature as follows: "The use of multiple standard communication arrangements reduces the chance that a supplier will require a special arrangement, because most suppliers will be able to work under one of the communication arrangements". This is shown in Figures 4A-4D.

Another feature of the invention is implementing a mode of communication of the modes of communication when the first party's ability matches a mode of communication of the modes of communication. Claim 1 defines this feature as follows: "implementing a mode of communication of said modes of communication when said first party's ability matches a mode of communication of said modes of communication." This feature is described at various points in the specification, for example paragraph [0029] describes this feature as follows: "the invention provides a computerized decision tree based on input from the Procurement agent to allow all purchasing agents to consistently match the suppliers to the appropriate communication arrangements". This is shown in Figures 4A-4D.

Furthermore, as shown in FIG. 1, item 110 represents the input of a supplier's capabilities. More specifically, the purchasing agent will interview the supplier to determine the transaction volume, types of purchase orders used, purchase order dollar values and other similar information. In item 112, the purchasing agent enters such information through a computer interface (e.g., FIG. 5) into the portion of the invention that provides the decision tree. The decision tree portion of the invention is referred to as

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a Web Wizard which automates the selection of the appropriate communication arrangement for the supplier in question. One example of a decision tree according to the invention is shown in FIG. 3 and is discussed in detail below.

The decision tree shown in FIG. 3 will produce a recommended communication format/arrangement (e.g, fax, e-mail, etc.). In item 114, if the recommended format is Web-based, the invention determines the cost of processing orders through the Web-based system in item 118. FIGS. 4A-4D illustrate one example of determining the cost savings of a Web-based system and are discussed in greater detail below. Item 120 compares the cost of the Web-based system to the savings to determine whether the Web-based system is justified. If the Web-based system is justified, the invention proceeds with the Web-based system in item 122. If the Web-based system is not justified, the invention selects the next best communication system in item 124. Therefore, for example, if the Web-based system was not justified, the invention may revert to an e-mail communication system, or other non-network system, for the given customer, depending upon the results of the decision tree shown in FIG. 3. Then, the invention proceeds with orders and invoices on the selected communication arrangement/format, as shown in item 116.

Another feature of the invention is a method of selecting from a plurality of modes of communication. Claim 8 defines this feature as follows: "a method of selecting from a plurality of modes of communication." This feature is described at various points in the specification, for example paragraph [0017] describes this feature as follows: "a

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Web Wizard which automates the selection of the appropriate communication arrangement for the supplier in question". This is shown in Figure 3.

Another feature of the invention is inputting a first party's ability to communicate with a second party. Claim 8 defines this feature as follows: "inputting a first party's ability to communicate with a second party." This feature is described at various points in the specification, for example paragraph [0017] describes this feature as follows: "item 110 represents the input of a supplier's capabilities". This is shown in Figure 1.

Another feature of the invention is evaluating a cost effectiveness of a mode of communication of the modes of communication based on the first party's ability to communicate, wherein the modes of communication comprise at least two of telephone, facsimile, hard copy mail, electronic mail, and at least one on-line communication arrangement. Claim 8 defines this feature as follows: "evaluating a cost effectiveness of a mode of communication of said modes of communication based on said first party's ability to communicate, wherein said modes of communication comprise at least two of telephone, facsimile, hard copy mail, electronic mail, and at least one on-line communication arrangement." This feature is described at various points in the specification, for example paragraph [0025] describes this feature as follows: "communication arrangement should be evaluated to determine whether the costs associated with establishing the communication arrangement for a given supplier is worth the cost savings compared to the next best alternative communication arrangement". This is shown in Figures 4A-4D.



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Another feature of the invention is a substance of the mode of communication comprises at least one of purchase order and billing communications between a purchasing corporation and a supplier. Claim 8 defines this feature as follows: "a substance of said mode of communication comprises at least one of purchase order and billing communications between a purchasing corporation and a supplier." This feature is described at various points in the specification, for example paragraph [0015] describes this feature as follows: "a communication arrangement is the mode and format by which a supplier receives purchase orders and sends invoices to a corporation". This is shown in Figure 1.

Another feature of the invention is repeating the evaluating for a non-standard mode of communication of the modes of communication if the first party's ability does not match a standard mode of communication of the modes of communication previously evaluated. Claim 8 defines this feature as follows: "repeating said evaluating for a non-standard mode of communication of said modes of communication if said first party's ability does not match a standard mode of communication of said modes of communication previously evaluated." This feature is described at various points in the specification, for example paragraph [0029] describes this feature as follows: "The use of multiple standard communication arrangements reduces the chance that a supplier will require a special arrangement, because most suppliers will be able to work under one of the communication arrangements". This is shown in Figures 4A-4D.

Another feature of the invention is the non-standard mode of communication has a cost above the standard mode of communication. Claim 8 defines this feature as

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follows: "said non-standard mode of communication has a cost above said standard mode of communication." This feature is described at various points in the specification, for example paragraph [0018] describes this feature as follows: "if the Web-based system was not justified, the invention may revert to an e-mail communication system, or other non-network system, for the given customer, depending upon the results of the decision tree". This is shown in Figure 3.

Another feature of the invention is inputting the first party's ability into a decision tree. Claim 8 defines this feature as follows: "inputting said first party's ability into a decision tree." This feature is described at various points in the specification, for example paragraph [0017] describes this feature as follows: "the purchasing agent enters such information through a computer interface (e.g., Figure 5) into the portion of the invention that provides the decision tree". This is shown in Figure 1.

Another feature of the invention is determining a cost of establishing and maintaining the non-standard mode of communication. Claim 8 defines this feature as follows: "determining a cost of establishing and maintaining said non-standard mode of communication." This feature is described at various points in the specification, for example paragraph [0025] describes this feature as follows: "communication arrangement should be evaluated to determine whether the costs associated with establishing the communication arrangement for a given supplier is worth the cost savings compared to the next best alternative communication arrangement". This is shown in Figures 4A-4D.

Another feature of the invention is determining a savings associated with the non-standard mode of communication. Claim 8 defines this feature as follows: "determining

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a savings associated with said non-standard mode of communication." This feature is described at various points in the specification, for example paragraph [0025] describes this feature as follows: "communication arrangement should be evaluated to determine whether the costs associated with establishing the communication arrangement for a given supplier is worth the cost savings compared to the next best alternative communication arrangement". This is shown in Figures 4A-4D.

Another feature of the invention is comparing the cost to the savings to calculate a return on investment associated with the establishing and the maintaining of the non-standard mode of communication. Claim 8 defines this feature as follows: "comparing said cost to said savings to calculate a return on investment associated with said establishing and said maintaining of said non-standard mode of communication." This feature is described at various points in the specification, for example paragraph [0027] describes this feature as follows: "the savings per day is divided by the investment required for the Web-based system to determine the number of days required before the investment is paid back ". This is shown in Figure 4D.

Another feature of the invention is performing a cost-benefit analysis with respect to a mode of communication of the modes of communication matching the first party's ability. Claim 8 defines this feature as follows: "performing a cost-benefit analysis with respect to a mode of communication of said modes of communication matching said first party's ability." This feature is described at various points in the specification, for example paragraph [0025] describes this feature as follows: "one simplified example of the cost-benefit analysis performed to determine whether a purchaser should be provided

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with a communication arrangement that has substantial startup costs". This is shown in Figures 4A-4D.

Another feature of the invention is implementing the non-standard mode of communication when the first party's ability matches the non-standard mode of communication and the cost-benefit shows the non-standard mode of communication is justified. Claim 8 defines this feature as follows: "implementing said non-standard mode of communication when said first party's ability matches said non-standard mode of communication and said cost-benefit shows said non-standard mode of communication is justified." This feature is described at various points in the specification, for example paragraph [0029] describes this feature as follows: "the invention provides a computerized decision tree based on input from the Procurement agent to allow all purchasing agents to consistently match the suppliers to the appropriate communication arrangements". This is shown in Figures 4A-4D.

Furthermore, as shown in FIG. 1, item 110 represents the input of a supplier's capabilities. More specifically, the purchasing agent will interview the supplier to determine the transaction volume, types of purchase orders used, purchase order dollar values and other similar information. In item 112, the purchasing agent enters such information through a computer interface (e.g., FIG. 5) into the portion of the invention that provides the decision tree. The decision tree portion of the invention is referred to as a Web Wizard which automates the selection of the appropriate communication arrangement for the supplier in question. One example of a decision tree according to the invention is shown in FIG. 3 and is discussed in detail below.

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The decision tree shown in FIG. 3 will produce a recommended communication format/arrangement (e.g, fax, e-mail, etc.). In item 114, if the recommended format is Web-based, the invention determines the cost of processing orders through the Web-based system in item 118. FIGS. 4A-4D illustrate one example of determining the cost savings of a Web-based system and are discussed in greater detail below. Item 120 compares the cost of the Web-based system to the savings to determine whether the Web-based system is justified. If the Web-based system is justified, the invention proceeds with the Web-based system in item 122. If the Web-based system is not justified, the invention selects the next best communication system in item 124. Therefore, for example, if the Web-based system was not justified, the invention may revert to an e-mail communication system, or other non-network system, for the given customer, depending upon the results of the decision tree shown in FIG. 3. Then, the invention proceeds with orders and invoices on the selected communication arrangement/format, as shown in item 116.

One feature of the invention is a method of selecting from a plurality of modes of communication. Claim 14 defines this feature as follows: "a method of selecting from a plurality of modes of communication." This feature is described at various points in the specification, for example paragraph [0017] describes this feature as follows: "a Web Wizard which automates the selection of the appropriate communication arrangement for the supplier in question". This is shown in Figure 3.

Another feature of the invention is inputting a first party's ability to communicate with a second party. Claim 14 defines this feature as follows: "inputting a first party's

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ability to communicate with a second party." This feature is described at various points in the specification, for example paragraph [0017] describes this feature as follows: "item 110 represents the input of a supplier's capabilities". This is shown in Figure 1.

Another feature of the invention is evaluating a cost effectiveness of a mode of communication of the modes of communication based on the first party's ability to communicate, wherein the modes of communication comprise at least two of telephone, facsimile, hard copy mail, electronic mail, and at least one on-line communication arrangement. Claim 14 defines this feature as follows: "evaluating a cost effectiveness of a mode of communication of said modes of communication based on said first party's ability to communicate, wherein said modes of communication comprise at least two of telephone, facsimile, hard copy mail, electronic mail, and at least one on-line communication arrangement." This feature is described at various points in the specification, for example paragraph [0025] describes this feature as follows:

"communication arrangement should be evaluated to determine whether the costs associated with establishing the communication arrangement for a given supplier is worth the cost savings compared to the next best alternative communication arrangement". This is shown in Figures 4A-4D.

Another feature of the invention is inputting the first party's ability into a decision tree. Claim 14 defines this feature as follows: "inputting said first party's ability into a decision tree." This feature is described at various points in the specification, for example paragraph [0017] describes this feature as follows: "the purchasing agent enters

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such information through a computer interface (e.g., Figure 5) into the portion of the invention that provides the decision tree". This is shown in Figure 1.

Another feature of the invention is determining a cost of establishing and maintaining the mode of communication. Claim 14 defines this feature as follows: "determining a cost of establishing and maintaining said mode of communication." This feature is described at various points in the specification, for example paragraph [0025] describes this feature as follows: "communication arrangement should be evaluated to determine whether the costs associated with establishing the communication arrangement for a given supplier is worth the cost savings compared to the next best alternative communication arrangement". This is shown in Figures 4A-4D.

Another feature of the invention is determining a savings associated with the mode of communication. Claim 14 defines this feature as follows: "determining a savings associated with said mode of communication." This feature is described at various points in the specification, for example paragraph [0025] describes this feature as follows: "communication arrangement should be evaluated to determine whether the costs associated with establishing the communication arrangement for a given supplier is worth the cost savings compared to the next best alternative communication arrangement". This is shown in Figures 4A-4D.

Another feature of the invention is comparing the cost to the savings to calculate a return on investment associated with the establishing and the maintaining of the mode of communication. Claim 14 defines this feature as follows: "comparing said cost to said savings to calculate a return on investment associated with said establishing and said

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maintaining of said mode of communication." This feature is described at various points in the specification, for example paragraph [0027] describes this feature as follows: "the savings per day is divided by the investment required for the Web-based system to determine the number of days required before the investment is paid back ". This is shown in Figure 4D.

Another feature of the invention is repeating the evaluating for a different mode of communication of the modes of communication if the first party's ability does not match a mode of communication of the modes of communication previously evaluated. Claim 14 defines this feature as follows: "repeating said evaluating for a different mode of communication of said modes of communication if said first party's ability does not match a mode of communication of said modes of communication previously evaluated." This feature is described at various points in the specification, for example paragraph [0029] describes this feature as follows: "The use of multiple standard communication arrangements reduces the chance that a supplier will require a special arrangement, because most suppliers will be able to work under one of the communication arrangements". This is shown in Figures 4A-4D.

Another feature of the invention is implementing a mode of communication of the modes of communication when the first party's ability matches a mode of communication of the modes of communication. Claim 14 defines this feature as follows: "implementing a mode of communication of said modes of communication when said first party's ability matches a mode of communication of said modes of communication." This feature is described at various points in the specification, for example paragraph [0029] describes



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this feature as follows: "the invention provides a computerized decision tree based on input from the Procurement agent to allow all purchasing agents to consistently match the suppliers to the appropriate communication arrangements". This is shown in Figures 4A-4D.

Furthermore, as shown in FIG. 1, item 110 represents the input of a supplier's capabilities. More specifically, the purchasing agent will interview the supplier to determine the transaction volume, types of purchase orders used, purchase order dollar values and other similar information. In item 112, the purchasing agent enters such information through a computer interface (e.g., FIG. 5) into the portion of the invention that provides the decision tree. The decision tree portion of the invention is referred to as a Web Wizard which automates the selection of the appropriate communication arrangement for the supplier in question. One example of a decision tree according to the invention is shown in FIG. 3 and is discussed in detail below.

The decision tree shown in FIG. 3 will produce a recommended communication format/arrangement (e.g, fax, e-mail, etc.). In item 114, if the recommended format is Web-based, the invention determines the cost of processing orders through the Web-based system in item 118. FIGS. 4A-4D illustrate one example of determining the cost savings of a Web-based system and are discussed in greater detail below. Item 120 compares the cost of the Web-based system to the savings to determine whether the Web-based system is justified. If the Web-based system is justified, the invention proceeds with the Web-based system in item 122. If the Web-based system is not justified, the invention selects the next best communication system in item 124. Therefore, for

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example, if the Web-based system was not justified, the invention may revert to an e-mail communication system, or other non-network system, for the given customer, depending upon the results of the decision tree shown in FIG. 3. Then, the invention proceeds with orders and invoices on the selected communication arrangement/format, as shown in item 116.

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The issues presented for review 1-3, 5-8, 10, 12-16, and 18-22 are unpatentable under 35 U.S.C. §103(a) by Marsh, in view of Dalheimer.

## **VII. ARGUMENT**

### **A. The Rejections Based on Marsh in view of Dalheimer**

#### **1. The Position in the Office Action**

The Office Action states:

As per claim 1, Marsh et al. teaches a method of selecting from a plurality of modes of communication comprising:

(a) inputting a first party's ability to communicate with a second party (data regarding a given cellular account, subscriber, or group of subscribers if the service is provided for a corporate customer, is provided by a carrier; optimizer process receives as input the various service plans, service plan packages, and coverage areas offered by various carriers and that are associated with each service plan package) [Column 7, lines 15-17, Column 16, line 60 — Column 17, line 1];

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(b) evaluating a cost effectiveness of a mode of communication of said modes of communication based on said first party's ability to communicate (MAMBA system provides an analysis of periodically loaded wireless service usage of a given account or subscriber, and/or group of accounts or subscribers, and determines whether or not that subscriber, or group of subscribers, is on the optimal wireless service plan according to the particular subscriber's usage patterns across a variable number of service billing periods) [Column 8, lines 54-62], said evaluating comprising:

(i) inputting said first party's ability into a decision tree {although not described as a "decision tree", decision points 1498, 1501, 1504, 1512, 1519, 1523, 1526, 1529, and 1532 determine whether current savings of different package types are greater than max savings, performing the same functionality as a "decision tree", by providing decision modules with consequences (if YES, then save current savings; if NO, then move to next package type)} [Figures 34A, 35A];

(ii) determining a cost of establishing and maintaining said mode of communication (calculate the cost of each service plan package combination for the given user usage profile) [Column 8, lines 37-40];

(iii) determining a savings associated with said mode of communication (if the savings is sufficient (efficiency > 1.x), where x is the historical percentage savings, then change plans; determine how much package saves against current base package cost) [Column 23, lines 50-52, Column 34, lines 65-67, Figure 35B]; and

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- (iv) comparing said cost to said savings to calculate a return on investment associated with said establishing and said maintaining of said mode of communication (relative attractiveness of a service plan instance is determined by comparing it to the corresponding actual billed usage of the current service plan for the given period; the specific measure, termed “efficiency”, is calculated as current plan costs/service plan instance estimated cost; if the efficiency factor is greater than 1, then the service plan instance is more cost effective than the other plan) [Column 18, lines 34-45];
- (c) repeating said evaluating for a different mode of communication of said modes of communication if said first party’s ability does not match a mode of communication of said modes of communication previously evaluated (MAMBA system then repeats the logical steps (load data, create a calling profile, identify optimal service plan options, make recommendations as to the best service plan and options) in accordance with a predefined periodic basis) [Column 7, lines 31-33]; and
- (d) implementing a mode of communication of said modes of communication when said first party’s ability matches a mode of communication of said modes of communication (if there is a more optimal plan, then change plans) [Column 23, lines 50-52].

Marsh et al. does not explicitly teach the step of considering modes of communication including telephone, facsimile, hard copy mail, electronic mail, and on-line communication arrangements. However, Dalheimer teaches the step of choosing

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from amongst a plurality of common communication channels, including email, postal mail, fax, telephone, video conferencing, IRC and IP telephony [Page 2].

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Marsh et al. to include the step of choosing from amongst a plurality of common communication channels, because doing so further expands the ability of Marsh et al. to enable selection of a best telecommunication service provider for a customer based on historical usage and costs.

As per claim 2, Marsh et al. teaches the method in claim 1, wherein a substance of said communication mode of communication comprise at least one of a purchase order and billing communications between a purchasing corporation and a supplier (calling package being a communications service “ordered” and billed for; The Marsh system includes a transceiver configured to receive billing information associated with a subscriber of a telecommunications service, the subscriber being a purchasing “corporation” and the telecommunication service provider being the “supplier”) [Abstract].

As per claim 3, Marsh et al teaches the method in claim 2, wherein said first party comprises said supplier (telecommunications service providers) and said second party comprises said purchasing corporation (subscriber of a telecommunications service) (The subscriber constitutes a purchasing entity, and the service provider provides telecommunications service, making them a supplier of telecommunications service) [abstract].

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As per claim 5, Marsh et al teaches the method in claim 1, wherein said decision tree orders mode of communication that are evaluated by their cost effectiveness to the second party (listing of historical prediction model efficiency of Plans A-E, along with Current Plan) [Tables 7-8].

As per claim 6, Marsh et al. teaches the method in claim 1, further comprising before said implementing, performing a cost-benefit analysis (calculate “efficiency” of each service plan instance to determine relative attractiveness) with respect to *a* mode of communication matching said first parties ability [Column 18, lines 15-44].

As per claim 7, Marsh et al. teaches the method in claim 6, wherein said cost-benefit analysis compares the cost of establishing a matching mode of communication to the cost of a next mode of communication (listing of historical prediction model cost of Plans A-E, along with Current Plan) [Tables 7-8].

As per claim 8, Marsh et al. teaches a method of selecting from a plurality of modes of communication comprising:

(a) inputting a first party’s ability to communicate with a second party (data regarding a given cellular account, subscriber, or group of subscribers if the service is provided for a corporate customer, is provided by a carrier; optimator process receives as input the various service plans, service plan packages, and coverage areas offered by various carriers and that are associated with each service plan package) [Column 7, lines 15-17, Column 16, line 60— Column 17, line 1];

(b) evaluating a cost effectiveness of a standard mode of communication (The current service plan instance is taken to represent a “standard” communication

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arrangement, and each of a plurality of alternative service plans constitutes a “non-standard” communication arrangement) based on said first party’s ability to communicate (MAMBA system provides an analysis of periodically loaded wireless service usage of a given account or subscriber, and/or group of accounts or subscribers, and determines whether or not that subscriber, or group of subscribers, is on the optimal wireless service plan according to the particular subscriber’s usage patterns across a variable number of service billing periods), wherein said mode of communication comprises telephone (wireless communication services) [Column 8, lines 54-62];

said evaluating comprising:

(c) repeating said evaluating for a different mode of communication if said first party’s ability does not match a mode of communication previously evaluated (MAMBA system then repeats the logical steps (load data, create a calling profile, identify optimal service plan options, make recommendations as to the best service plan and options) in accordance with a predefined periodic basis) [Column 7, lines 31-33], wherein said non-standard mode of communication has a cost above said standard mode of communication (Alternative (i.e. “non-standard”) communication arrangements are implemented when proven to be more “efficient” (calculated by current plan costs/service plan instance estimated cost), and yield more cost savings than the current communication arrangement), and wherein said evaluating comprises:

(i) inputting said first party’s ability into a decision tree (although not described as a “decision tree”, decision points 1498, 1501, 1504, 1512, 1519, 1523, 1526, 1529, and 1532 determine whether current savings of different

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package types are greater than max savings, performing the same functionality as a “decision tree”, by providing decision modules with consequences (if YES, then save current savings; if NO, then move to next package type)} [Figures 34A, 35A];

(ii) determining a cost of establishing and maintaining said mode of communication (calculate the cost of each service plan package combination for the given user usage profile) [Column 8, lines 37-40];

(iii) determining a savings associated with said mode of communication (if the savings is sufficient ( $\text{efficiency} > I, x$ ), where  $x$  is the historical percentage savings, then change plans; determine how much package saves against current base package cost) [Column 23, lines 50-52, Column 34, lines 65-67, Figure 35B]; and

(iv) comparing said cost to said savings to calculate a return on investment associated with said establishing and said maintaining of said mode of communication (relative attractiveness of a service plan instance is determined by comparing it to the corresponding actual billed usage of the current service plan for the given period; the specific measure, termed “efficiency”, is calculated as  $\text{current plan costs} / \text{service plan instance estimated cost}$ ; if the efficiency factor is greater than  $I$ , then the service plan instance is more cost effective than the other plan) [Column 18, lines 34-45];



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(d) performing a cost-benefit analysis with respect to a mode of communication matching said first parties ability (calculate “efficiency” of each service plan instance to determine relative attractiveness) [Column 18, lines 15-44]; and

(e) implementing a communication arrangement when said first party’s ability matches a mode of communication (if there is a more optimal plan, then change plans) [Column 23, lines 50-52].

Marsh et al. does not explicitly teach the evaluation and consideration of different modes of communication, including facsimile, e-mail, hard copy mail, and at least one on-line communication arrangement.

However, Official Notice is taken that facsimile, e-mail, hard copy mail, and the Internet are communication means that are old and well known in the art capable of transmitting communications between a service provider and customer. Marsh et al. evaluates the cost effectiveness of a plurality of service providers and service plans to determine the optimal communications plan based on the needs of the user. Improving the quality of service and the value of services received by a subscriber, and enabling selection of a best telecommunications service are goals of Marsh et al. [Column 2, lines 53-55, abstract]; therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Marsh et al. to consider facsimile, e-mail, hard copy mail, and the Internet as doing so would expand the capabilities of Marsh et al. to include alternative modes of communication, thereby validating the analysis performed by Marsh et al., as it now includes additional modes of communication to

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consider to recommend to the user in order to improve the quality and cost effectiveness of the value of services received.

As per claim 21, Marsh et al. does not explicitly teach wherein said evaluating and said implementing of said mode of communication comprises evaluating and implementing at least one of telephone, facsimile, e-mail, hard copy mail, and at least one on-line communication arrangement.

However, Official Notice is taken that facsimile, e-mail, hard copy mail, and the Internet are communication means that are old and well known in the art capable of transmitting communications between a service provider and customer. Marsh et al. evaluates the cost effectiveness of a plurality of service providers and service plans to determine the optimal communications plan based on the needs of the user. Improving the quality of service and the value of services received by a subscriber, and enabling selection of a best telecommunications service are goals of Marsh et al. [Column 2, lines 53-55, abstract]; therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Marsh et al. to consider facsimile, e-mail, hard copy mail, and the Internet as doing so would expand the capabilities of Marsh et al. to include alternative modes of communication, thereby validating the analysis performed by Marsh et al., as it now includes additional modes of communication to consider to recommend to the user in order to improve the quality and cost effectiveness of the value of services received.

Claims 14-16 and 18-20 recite limitations already addressed by the rejection of claims 1 and 5-7 above; therefore, the same rejections apply.

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As per claim 14, the moving average monthly bill analysis (MAMBA) system utilized by Marsh et al. is implemented in software, hardware, or a combination thereof [Column 4, line 41 — Column 5, line 45], thus providing a program storage device readable by machine tangibly embodying a program of instructions executable by the machine to perform the steps of claims 1 and 5-7 as discussed above.

Claims 10, 12, 13, 15, 16, and 22 recite limitations already addressed by the rejection of claims 2, 3, and 21 above; therefore, the same rejections apply.

### **2. Appellants' Position**

#### **a. Independent Claim 1**

Appellants traverse the rejections because the prior art of record fails to teach or suggest the claimed features of “evaluating a cost effectiveness of a mode of communication based on a first party’s ability to communicate” (independent claim 1). Although the prior art references disclose evaluating communication channels based on “cost”, unlike the claimed invention, the prior art does not teach or suggest the claimed element that such “cost effectiveness” is evaluated *based on a first party’s ability to communicate*.

More specifically, the only portion of Dalheimer that discusses “costs” is provided in the second paragraph on page 2. Dalheimer provides that “[s]ome aspects to consider when selecting communication channels are asynchronous vs. synchronous channels, latency, and cost” (Dalheimer, p.2, para. 2). There is no other mention of cost in Dalheimer

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Dalheimer does not evaluate the “cost” in any way, but merely states that cost is an aspect to “consider”. Dalheimer fails to disclose whether the “cost” is the cost to the buyer, the cost to the seller, or the combined cost between the buyer and the seller. Any interpretation beyond “considering cost when selecting communication channels” in light of Dalheimer would be based on hindsight. The claimed invention goes well beyond considering cost and instead evaluates cost effectiveness based on a “party’s ability to communicate”.

The Office Action argues that Marsh discloses evaluating a cost effectiveness of a mode of communication based on a first party’s ability to communicate (Office Action, p. 3, last para. – p. 4, first para.). In support for this contention, the Office Action cites column 8, lines 54-62, of Marsh. Appellants respectfully disagree with such a conclusion and submit that nothing within Marsh, including the portions cited by the Office Action, teaches or suggests evaluating a cost effectiveness of a mode of communication based on a first party’s ability to communicate. Instead, Marsh only evaluates whether a subscriber of a wireless service is on an optimal service plan based on usage patterns. This has nothing to do with evaluating different “modes” of communication as is claimed, much less provide a teaching of such evaluation being based on an ability to communicate.

Specifically, as described in column 8, lines 52-65 of Marsh, the system 100 in Marsh extends the ad hoc profiler application 200 into a multi-account or subscriber-automated in a recurring process that provides an analysis of *periodically loaded wireless service usage of a given account or subscriber*, and/or group of accounts or subscribers

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(e.g., a set of subscribers all employed by the same company and all subscribing to the same carrier), Marsh determines whether or not that subscriber, or group of subscribers, *is on the optimal wireless service plan according to the particular subscriber's usage patterns* across a variable number of service billing periods. If not, the MAMBA system 100 suggests alternative cellular service plans that better meet the users' usage patterns and that reduce the overall cost of service to the account/subscriber.

This excerpt of Marsh does not teach or suggest evaluating the cost effectiveness of a mode of communication (e.g., the “wireless service”) of the modes of communication (e.g., internet, fax, postal delivery) as claimed. Instead, Marsh only discloses determining whether the subscriber is on the optimal service plan for a single mode of communication (“wireless service”). Appellants submit that that the service plans of Marsh are not modes of communication; the service plans of Marsh are different billing options for a *single* mode of communication (“wireless service”). For example, whether a user is paying \$30 a month for 500 wireless minutes or \$50 a month for 1000 wireless minutes, the mode of communication is still the same. To the contrary, a user can pay \$30 a month for 500 Internet minutes and \$30 a month for 500 cellular telephone minutes, wherein the Internet minutes and cellular telephone minutes are different modes of communication.

In other words, the “service plans” of Marsh do not teach the “modes of communication” of the claimed invention because a first service plan does not employ a different mode of communication than a second service plan. Instead, given the system and method in Marsh, both the first and second service plans employ the same mode of

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communication (“wireless service”). For example, the first service plan does not employ telephone while the second service plan employs facsimile.

Furthermore, Appellants submit that unlike the claimed invention, the evaluation of Marsh is not based on the subscriber’s “ability to communicate”. Rather, Marsh’s evaluation is based on “the particular subscriber’s usage patterns across a number of service billing periods” (Marsh, col. 8, lines 61-62). Moreover, “usage patterns” do not teach the subscriber’s “ability to communicate”, but instead teaches a history of actual communication by the subscriber.

Accordingly, Appellants submit that the proposed combination of Dalheimer and Marsh would not have resulted in the claimed invention. The vaguely referenced “cost” considered in Dalheimer is not based on a first party’s ability to communicate; rather, the cost considered is not specific to a particular user. Moreover, Marsh does not evaluate the cost effectiveness of a mode of communication of the modes of communication based on the subscriber’s ability to communicate. Instead, Marsh only evaluates whether the subscriber is on an optimal service plan of a single mode of communication (wireless service) based on usage patterns. Therefore, it is Appellants’ position that the prior art of record fails to teach or suggest the claimed features of “evaluating a cost effectiveness of a mode of communication of said modes of communication based on said first party’s ability to communicate” as defined in independent claim 1. In view the foregoing, the Board is respectfully requested to reconsider and withdraw this rejection.

**b. Independent Claims 8 and 14**

Appellants traverse the rejections because the prior art of record fails to teach or suggest the claimed features of “evaluating a cost effectiveness of a mode of communication based on a first party’s ability to communicate” (independent claims 8 and 14). Although the prior art references disclose evaluating communication channels based on “cost”, unlike the claimed invention, the prior art does not teach or suggest the claimed element that such “cost effectiveness” is evaluated *based on a first party’s ability to communicate*.

More specifically, the only portion of Dalheimer that discusses “costs” is provided in the second paragraph on page 2. Dalheimer provides that “[s]ome aspects to consider when selecting communication channels are asynchronous vs. synchronous channels, latency, and cost” (Dalheimer, p.2, para. 2). There is no other mention of cost in Dalheimer

Dalheimer does not evaluate the “cost” in any way, but merely states that cost is an aspect to “consider”. Dalheimer fails to disclose whether the “cost” is the cost to the buyer, the cost to the seller, or the combined cost between the buyer and the seller. Any interpretation beyond “considering cost when selecting communication channels” in light of Dalheimer would be based on hindsight. The claimed invention goes well beyond considering cost and instead evaluates cost effectiveness based on a “party’s ability to communicate”.

The Office Action argues that Marsh discloses evaluating a cost effectiveness of a mode of communication based on a first party’s ability to communicate (Office Action, p.

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3, last para. – p. 4, first para.). In support for this contention, the Office Action cites column 8, lines 54-62, of Marsh. Appellants respectfully disagree with such a conclusion and submit that nothing within Marsh, including the portions cited by the Office Action, teaches or suggests evaluating a cost effectiveness of a mode of communication based on a first party's ability to communicate. Instead, Marsh only evaluates whether a subscriber of a wireless service is on an optimal service plan based on usage patterns. This has nothing to do with evaluating different “modes” of communication as is claimed, much less provide a teaching of such evaluation being based on an ability to communicate.

Specifically, as described in column 8, lines 52-65 of Marsh, the system 100 in Marsh extends the ad hoc profiler application 200 into a multi-account or subscriber-automated in a recurring process that provides an analysis of *periodically loaded wireless service usage of a given account or subscriber*, and/or group of accounts or subscribers (e.g., a set of subscribers all employed by the same company and all subscribing to the same carrier), Marsh determines whether or not that subscriber, or group of subscribers, *is on the optimal wireless service plan according to the particular subscriber's usage patterns* across a variable number of service billing periods. If not, the MAMBA system 100 suggests alternative cellular service plans that better meet the users' usage patterns and that reduce the overall cost of service to the account/subscriber.

This excerpt of Marsh does not teach or suggest evaluating the cost effectiveness of a mode of communication (e.g., the “wireless service”) of the modes of communication (e.g., internet, fax, postal delivery) as claimed. Instead, Marsh only



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discloses determining whether the subscriber is on the optimal service plan for a single mode of communication (“wireless service”). Appellants submit that that the service plans of Marsh are not modes of communication; the service plans of Marsh are different billing options for a *single* mode of communication (“wireless service”). For example, whether a user is paying \$30 a month for 500 wireless minutes or \$50 a month for 1000 wireless minutes, the mode of communication is still the same. To the contrary, a user can pay \$30 a month for 500 Internet minutes and \$30 a month for 500 cellular telephone minutes, wherein the Internet minutes and cellular telephone minutes are different modes of communication.

In other words, the “service plans” of Marsh do not teach the “modes of communication” of the claimed invention because a first service plan does not employ a different mode of communication than a second service plan. Instead, given the system and method in Marsh, both the first and second service plans employ the same mode of communication (“wireless service”). For example, the first service plan does not employ telephone while the second service plan employs facsimile.

Furthermore, Appellants submit that unlike the claimed invention, the evaluation of Marsh is not based on the subscriber’s “ability to communicate”. Rather, Marsh’s evaluation is based on “the particular subscriber’s usage patterns across a number of service billing periods” (Marsh, col. 8, lines 61-62). Moreover, “usage patterns” do not teach the subscriber’s “ability to communicate”, but instead teaches a history of actual communication by the subscriber.

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Accordingly, Appellants submit that the proposed combination of Dalheimer and Marsh would not have resulted in the claimed invention. The vaguely referenced “cost” considered in Dalheimer is not based on a first party’s ability to communicate; rather, the cost considered is not specific to a particular user. Moreover, Marsh does not evaluate the cost effectiveness of a mode of communication of the modes of communication based on the subscriber’s ability to communicate. Instead, Marsh only evaluates whether the subscriber is on an optimal service plan of a single mode of communication (wireless service) based on usage patterns. Therefore, it is Appellants’ position that the prior art of record fails to teach or suggest the claimed features of “evaluating a cost effectiveness of a mode of communication of said modes of communication based on said first party’s ability to communicate” as defined in independent claims 8 and 14. In view the foregoing, the Board is respectfully requested to reconsider and withdraw this rejection.

### **c. Dependent Claims 6 and 19**

The Office Action argues that Marsh discloses the claimed features of “performing a cost-benefit analysis with respect to a mode of communication matching said first parties ability” (dependent claims 6 and 19). In support for this contention, the Office Action references column 18, lines 15-44. Appellants respectfully disagree with such a conclusion and submit that Marsh merely discloses calculating “efficiencies” of different “service plans”.

However, as described above, the “service plans” of Marsh do not teach the “modes of communication” of the claimed invention. More specifically, the different

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service plans of Marsh do not teach different modes of communication; rather, the service plans of Marsh are different billing options for a *single* mode of communication (“wireless service”). For example, whether a user is paying \$30 a month for 500 wireless minutes or \$50 a month for 1000 wireless minutes, the mode of communication is still the same (wireless communication). To the contrary, a user can pay \$30 a month for 500 Internet minutes and \$30 a month for 500 cellular telephone minutes, wherein the Internet minutes and cellular telephone minutes are different modes of communication.

In other words, the “service plans” of Marsh do not teach the “modes of communication” of the claimed invention because a first service plan does not employ a different mode of communication than a second service plan. Instead, given the system and method in Marsh, both the first and second service plans employ the same mode of communication (“wireless service”). For example, the first service plan does not employ telephone while the second service plan employs facsimile.

Furthermore, as described in paragraph 0017 of Appellants’ disclosure, a communication arrangement is the mode and format by which a supplier receives purchase orders and sends invoices to a corporation. For example, one communication arrangement is a telephone ordering system where orders are placed over the telephone. Another communication arrangement is a facsimile communication arrangement. In this arrangement, orders are sent to a supplier's fax machine. In a similar manner, invoices can be returned to the corporation by fax. Another communication arrangement is an e-mail system, whereby orders are placed with the supplier and invoices are received from the supplier through an e-mail message system. Also, an online communication

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arrangement can be established whereby the supplier is provided access to the corporations network for the limited purpose of receiving orders and submitting invoices.

Accordingly, Appellants submit that Marsh does not perform a cost-benefit analysis for a mode of communication matching the first parties ability to communicate. Instead, Marsh merely discloses calculating “efficiencies” of different “service plans”. However, the “service plans” of Marsh do not teach the “modes of communication” of the claimed invention. Rather, the “service plans” of Marsh are different billing options for a *single* mode of communication (“wireless service”). Therefore, it is Appellants’ position that the prior art of record fails to teach or suggest the claimed features of “performing a cost-benefit analysis with respect to a mode of communication matching said first parties ability” as defined in dependent claims 6 and 19.

### **d. Dependent Claims 2 and 15**

It is Appellants' position that the proposed combination of Marsh and Dalheimer does not render obvious independent claims 1 and 14 and similarly does not render obvious dependent claims 2 and 15. In view the foregoing, the Board is respectfully requested to reconsider and withdraw this rejection.

### **e. Dependent Claims 3, 10, and 16**

It is Appellants' position that the proposed combination of Marsh and Dalheimer does not render obvious independent claims 1, 8, and 14 and similarly does not render

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obvious dependent claims 3, 10, and 16. In view the foregoing, the Board is respectfully requested to reconsider and withdraw this rejection.

### **f. Dependent Claims 5, 12, and 18**

Appellants traverse the rejections because the prior art of record fails to teach or suggest the claimed features of “wherein said decision tree orders modes of communication that are evaluated by their cost effectiveness to the second party” (dependent claims 5, 12, and 18). Although the prior art references disclose evaluating communication channels based on “cost”, unlike the claimed invention, the prior art does not teach or suggest the claimed element that such “cost effectiveness” is evaluated *based on a second party’s ability to communicate*.

More specifically, the only portion of Dalheimer that discusses “costs” is provided in the second paragraph on page 2. Dalheimer provides that “[s]ome aspects to consider when selecting communication channels are asynchronous vs. synchronous channels, latency, and cost” (Dalheimer, p.2, para. 2). There is no other mention of cost in Dalheimer

Dalheimer does not evaluate the “cost” in any way, but merely states that cost is an aspect to “consider”. Dalheimer fails to disclose whether the “cost” is the cost to the buyer, the cost to the seller, or the combined cost between the buyer and the seller. Any interpretation beyond “considering cost when selecting communication channels” in light of Dalheimer would be based on hindsight. The claimed invention goes well beyond

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considering cost and instead evaluates cost effectiveness based on a “party’s ability to communicate”.

The Office Action argues that Marsh discloses evaluating a cost effectiveness of a mode of communication based on a second party’s ability to communicate (Office Action, p. 3, last para. – p. 4, first para.). In support for this contention, the Office Action cites column 8, lines 54-62, of Marsh. Appellants respectfully disagree with such a conclusion and submit that nothing within Marsh, including the portions cited by the Office Action, teaches or suggests evaluating a cost effectiveness of a mode of communication based on a second party’s ability to communicate. Instead, Marsh only evaluates whether a subscriber of a wireless service is on an optimal service plan based on usage patterns. This has nothing to do with evaluating different “modes” of communication as is claimed, much less provide a teaching of such evaluation being based on an ability to communicate.

Specifically, as described in column 8, lines 52-65 of Marsh, the system 100 in Marsh extends the ad hoc profiler application 200 into a multi-account or subscriber-automated in a recurring process that provides an analysis of *periodically loaded wireless service usage of a given account or subscriber*, and/or group of accounts or subscribers (e.g., a set of subscribers all employed by the same company and all subscribing to the same carrier), Marsh determines whether or not that subscriber, or group of subscribers, *is on the optimal wireless service plan according to the particular subscriber's usage patterns* across a variable number of service billing periods. If not, the MAMBA system

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100 suggests alternative cellular service plans that better meet the users' usage patterns and that reduce the overall cost of service to the account/subscriber.

This excerpt of Marsh does not teach or suggest evaluating the cost effectiveness of a mode of communication (e.g., the “wireless service”) of the modes of communication (e.g., internet, fax, postal delivery) as claimed. Instead, Marsh only discloses determining whether the subscriber is on the optimal service plan for a single mode of communication (“wireless service”). Appellants submit that that the service plans of Marsh are not modes of communication; the service plans of Marsh are different billing options for a *single* mode of communication (“wireless service”). For example, whether a user is paying \$30 a month for 500 wireless minutes or \$50 a month for 1000 wireless minutes, the mode of communication is still the same. To the contrary, a user can pay \$30 a month for 500 Internet minutes and \$30 a month for 500 cellular telephone minutes, wherein the Internet minutes and cellular telephone minutes are different modes of communication.

In other words, the “service plans” of Marsh do not teach the “modes of communication” of the claimed invention because a first service plan does not employ a different mode of communication than a second service plan. Instead, given the system and method in Marsh, both the first and second service plans employ the same mode of communication (“wireless service”). For example, the first service plan does not employ telephone while the second service plan employs facsimile.

Furthermore, Appellants submit that unlike the claimed invention, the evaluation of Marsh is not based on the subscriber’s “ability to communicate”. Rather, Marsh’s

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evaluation is based on “the particular subscriber’s usage patterns across a number of service billing periods” (Marsh, col. 8, lines 61-62). Moreover, “usage patterns” do not teach the subscriber’s “ability to communicate”, but instead teaches a history of actual communication by the subscriber.

Accordingly, Appellants submit that the proposed combination of Dalheimer and Marsh would not have resulted in the claimed invention. The vaguely referenced “cost” considered in Dalheimer is not based on a second party’s ability to communicate; rather, the cost considered is not specific to a particular user. Moreover, Marsh does not evaluate the cost effectiveness of a mode of communication of the modes of communication based on the subscriber’s ability to communicate. Instead, Marsh only evaluates whether the subscriber is on an optimal service plan of a single mode of communication (wireless service) based on usage patterns. Therefore, it is Appellants’ position that the prior art of record fails to teach or suggest the claimed features of “wherein said decision tree orders modes of communication that are evaluated by their cost effectiveness to the second party” as defined in dependent claims 5, 12, and 18. In view the foregoing, the Board is respectfully requested to reconsider and withdraw this rejection.

### **g. Dependent Claims 7, 13, and 20**

Appellants traverse the rejections because the prior art of record fails to teach or suggest the claimed features “wherein said cost-benefit analysis compares the cost of



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establishing a matching mode of communication to the cost of a next mode of communication” (dependent claims 7, 13, and 20).

As described more fully above, the “service plans” of Marsh do not teach the “modes of communication” of the claimed invention. More specifically, the different service plans of Marsh do not teach different modes of communication; rather, the service plans of Marsh are different billing options for a *single* mode of communication (“wireless service”). For example, whether a user is paying \$30 a month for 500 wireless minutes or \$50 a month for 1000 wireless minutes, the mode of communication is still the same (wireless communication). To the contrary, a user can pay \$30 a month for 500 Internet minutes and \$30 a month for 500 cellular telephone minutes, wherein the Internet minutes and cellular telephone minutes are different modes of communication.

In other words, the “service plans” of Marsh do not teach the “modes of communication” of the claimed invention because a first service plan does not employ a different mode of communication than a second service plan. Instead, given the system and method in Marsh, both the first and second service plans employ the same mode of communication (“wireless service”). For example, the first service plan does not employ telephone while the second service plan employs facsimile.

Accordingly, Appellants submit that Marsh does not teach evaluating different modes of communication. Instead, Marsh discloses evaluating different service plans (or billing options) for a *single* mode of communication. Therefore, it is Appellants position that the prior art of record fails to teach or suggest the claimed features “wherein said cost-benefit analysis compares the cost of establishing a matching mode of

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communication to the cost of a next mode of communication” as defined in dependent claims 7, 13, and 20.

**h. Dependent Claims 21 and 22**

It is Appellants' position that the proposed combination of Marsh and Dalheimer does not render obvious independent claims 1 and 14 and similarly does not render obvious dependent claims 21 and 22. In view the foregoing, the Board is respectfully requested to reconsider and withdraw this rejection.

**B. CONCLUSION**

In view the forgoing, the Board is respectfully requested to reconsider and withdraw the rejections of claims 1-3, 5-8, 10, 12-16, and 18-22.

Please charge any deficiencies and credit any overpayments to Attorney's Deposit Account Number 50-0510.

Respectfully submitted,

Date: August 3, 2007

/Duane N. Moore/  
Duane N. Moore, Esq.  
Registration No. 53,352

Gibb & Rahman, LLC  
2568-A Riva Road, Suite 304  
Annapolis, MD, 21401  
Voice: (410) 573-6501  
Fax: (301) 261-8825  
Customer No. 29154

**IX. CLAIMS APPENDIX**

1. A method of selecting from a plurality of modes of communication, comprising:
  - inputting a first party's ability to communicate with a second party;
  - evaluating a cost effectiveness of a mode of communication of said modes of communication based on said first party's ability to communicate, wherein said modes of communication comprise at least two of telephone, facsimile, hard copy mail, electronic mail, and at least one on-line communication arrangement, and wherein said evaluating comprising:
    - inputting said first party's ability into a decision tree,
    - determining a cost of establishing and maintaining said mode of communication,
    - determining a savings associated with said mode of communication, and
    - comparing said cost to said savings to calculate a return on investment associated with said establishing and said maintaining of said mode of communication;
    - repeating said evaluating for a different mode of communication of said modes of communication if said first party's ability does not match a mode of communication of said modes of communication previously evaluated; and
    - implementing a mode of communication of said modes of communication when said first party's ability matches a mode of communication of said modes of communication.

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2. The method in claim 1, wherein a substance of said modes of communication comprise at least one of purchase order and billing communications between a purchasing corporation and a supplier.
3. The method in claim 2, wherein said first party comprises said supplier and said second party comprises said purchasing corporation.
4. (Cancelled).
5. The method in claim 1, wherein said decision tree orders modes of communication that are evaluated by their cost effectiveness to the second party.
6. The method in claim 1, further comprising before said implementing, performing a cost-benefit analysis with respect to a mode of communication matching said first parties ability.
7. The method in claim 6, wherein said cost-benefit analysis compares the cost of establishing a matching mode of communication to the cost of a next mode of communication.
8. A method of selecting from a plurality of modes of communication comprising:  
inputting a first party's ability to communicate with a second party;

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evaluating a cost effectiveness of a standard mode of communication of said modes of communication based on said first party's ability to communicate, wherein said modes of communication comprises at least two of telephone, facsimile, e-mail, hard copy mail, and at least one on-line communication arrangement, and wherein a substance of said mode of communication comprises at least one of purchase order and billing communications between a purchasing corporation and a supplier;

repeating said evaluating for a non-standard mode of communication of said modes of communication if said first party's ability does not match a standard mode of communication of said modes of communication previously evaluated, wherein said non-standard mode of communication has a cost above said standard mode of communication, and wherein said evaluating comprises:

inputting said first party's ability into a decision tree,

determining a cost of establishing and maintaining said non-standard mode of communication,

determining a savings associated with said non-standard mode of communication, and

comparing said cost to said savings to calculate a return on investment associated with said establishing and said maintaining of said non-standard mode of communication;

performing a cost-benefit analysis with respect to a mode of communication of said modes of communication matching said first party's ability; and

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implementing said non-standard mode of communication when said first party's ability matches said non-standard mode of communication and said cost-benefit shows said non-standard mode of communication is justified.

9. (Cancelled).

10. The method in claim 8, wherein said first party comprises said supplier and said second party comprises said purchasing corporation.

11. (Cancelled).

12. The method in claim 8, wherein said decision tree orders modes of communication that are evaluated by their cost effectiveness to the second party.

13. The method in claim 8, wherein said cost-benefit analysis compares the cost of establishing a matching mode of communication to the cost of a next mode of communication.

14. A program storage device readable by machine tangibly embodying a program of instructions executable by the machine to perform a method for selecting from a plurality of modes of communication, said method comprising:

inputting a first party's ability to communicate with a second party;

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evaluating a cost effectiveness of a mode of communication of said modes of communication based on said first party's ability to communicate, wherein said modes of communication comprise at least two of telephone, facsimile, hard copy mail, electronic mail, and at least one on-line communication arrangement, and wherein said evaluating comprising:

inputting said first party's ability into a decision tree,

determining a cost of establishing and maintaining said mode of communication,

determining a savings associated with said mode of communication, and

comparing said cost to said savings to calculate a return on investment associated with said establishing and said maintaining of said mode of communication;

repeating said evaluating for a different mode of communication of said modes of communication if said first party's ability does not match a mode of communication of said modes of communication previously evaluated; and

implementing a mode of communication of said modes of communication when said first party's ability matches a mode of communication of said modes of communication.

15. The program storage device in claim 14, wherein a substance of said modes of communication comprise at least one of purchase order and billing communications between a purchasing corporation and a supplier.

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16. The program storage device in claim 15, wherein said first party comprises said supplier and said second party comprises said purchasing corporation.

17. (Cancelled).

18. The program storage device in claim 14, wherein said decision tree orders modes of communication that are evaluated by their cost effectiveness to the second party.

19. The program storage device in claim 14, further comprising before said implementing, performing a cost-benefit analysis with respect to a mode of communication matching said first parties ability.

20. The program storage device in claim 19, wherein said cost-benefit analysis compares the cost of establishing a matching mode of communication to the cost of a next mode of communication.

21. The method in claim 1, wherein said evaluating and said implementing of said mode of communication comprises evaluating and implementing at least one of telephone, facsimile, e-mail, hard copy mail, and at least one on-line communication arrangement.



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22. The program storage device in claim 14, wherein said mode of communication comprises at least one of telephone, facsimile, e-mail, hard copy mail, and at least one on-line communication arrangement.

**X. EVIDENCE APPENDIX**

There is no other evidence known to Appellants, Appellants' legal representative or Assignee which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

**XI. RELATED PROCEEDINGS APPENDIX**

There is no other related proceedings known to Appellants, Appellants' legal representative or Assignee which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.